REMARKS

Applicant respectfully requests reconsideration of the above-identified application and entry of the after-final amendment pursuant to 37 C.F.R. § 1.116. Clarifying amendments have been made to Claims 89, 111, 112, 121, 122, 132-135, 149, 150, 164, and 179. New Claim 190 has been added, which depends from the only independent claim (Claim 89). Claims 168 and 169 have been canceled so that at least a corresponding number of claims have been canceled for entry of this amendment. Accordingly, Claims 89-183 and 185-190 are pending in the present application. Applicant acknowledges with appreciation that Claims 106-109 and 118 were deemed to contain allowable subject matter. Applicant appreciates the Examiners time on October 3, 2007, to discuss the entry of this amendment via a telephone conference.

Claims 89, 90, 105, 116-117 and 188-189 were rejected in an Office Action dated June 4, 2007 ("Office Action") under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 5,716,076, issued to Van Der Knaap et al. ("Van Der Knaap"). For the reasons that will be discussed in detail below, applicant respectfully asserts that the present application is in condition for allowance.

Claim Rejections Under 35 U.S.C. § 102

Claims 89, 90, 105, 116-117 and 188-189 stand rejected under 35 U.S.C. § 102(b) as being anticipated by Van Der Knaap. Applicant respectfully traverses the rejections to these claims. A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference. *Verdegaal Brothers v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 U.S.P.Q.2d. 1051, 1053 (Fed. Cir. 1987). Applicant respectfully asserts that Van Der Knaap fails to teach each and every element of the rejected claims.

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Claim 89 is directed to a vehicle suspension system for a vehicle a body, in which the body has a pitch center and a roll center. The vehicle further has at least one surface engaging vehicle support assembly and a reaction center. The suspension system includes at least one tie structure interposed between the vehicle support assembly and the body of the vehicle, a first interconnecting system, a second interconnecting system, and a load control system.

Claim 89 recites that the suspension system includes a second interconnecting system configured and arranged for interconnecting the tie structure(s) and the body about the pitch center or the roll center. Upon forces being imposed on the vehicle in pitch or roll during operation of the vehicle, the body rotates around the center(s) of rotation relative to the tie structure, in the direction opposite to the direction of the forces acting on the vehicle in pitch or roll. In other words, as stated in the specification on page 3, line 32-page 4, line 5, the forces imposed on the body acting through the center of gravity during, for example, cornering, cause the body to tilt inwardly into the curve relative to the tie structure in the direction opposite this resultant force. The configuration of Claim 89 allows the body to tilt or roll inwardly when corning, whereas such cornering on standard McPherson type suspension (like Van Der Knaap) cause the vehicle body to tilt or roll outwardly.

In particular, as the result of the configuration of the suspension of Van Der Knaap, the body 4 rolls outwardly about its roll center upon forces applied to the body that are generated by cornering, or pitches forwardly or backwardly about its pitch center upon forces applied to the body from braking or accelerating, respectively. This occurs because the center of gravity of the vehicle body 4 in Van Der Knaap is above the pitch and roll center created by its McPherson type suspension. See Col. 2, lines 21-22, where it states "The wheel suspension system is of the known McPherson type." Specifically, according to standard pitch or roll center calculations for McPherson type suspensions as set forth at page 268 of "Fundamentals of vehicle dynamics," by

T.D. Gillespie (copyright 1992), copies of which are attached as Exhibit A, the roll and pitch center of Van Der Knaap is somewhere along the centerline of and below the vehicle body 4. Thus, the pivot 17 is not the pitch center of Van Der Knaap as stated by the Examiner.

The pitch and roll center of Van Der Knaap is also below the center of gravity of the body, a result which causes the body of the vehicle to tilt outwardly (forwardly) in cornering (braking), which is completely opposite to the movement of the vehicle body of Claim 89. See page 1, line 24 through page 2, line 9, of the present application for a discussion of the pitch and roll centers of standard suspensions like Van Der Knaap. In particular, Van Der Knaap expressly discloses that the center of gravity of the body is positioned higher than the pitch/roll center when Van Der Knaap states the following at Col. 2, lines 31-40: "In the absence of the anti-roll/pitch mechanism, the spring 7 of the spring leg 6 is compressed when an increased wheel load delta P occurs, and the linkage triangle 2 will therefore pivot about the hinge point 3. The distance between the axle of the wheel 1 and the hinge point 9 becomes shorter, and this inevitably results in a rolling or pitching movement of the vehicle."

Thus, to counteract such roll or pitch, Van Der Knaap includes an anti-roll/pitch mechanism, which comprises a rod system 10 and auxiliary spring 18. As such, the McPherson type suspension system of Van Der Knaap inherently causes the vehicle body 4 to move in the same direction as the corning forces being imposed on the vehicle (e.g., the body tilts outwardly during corning since its center of gravity is at a higher elevation than its roll center) against which the anti-roll/pitch mechanism attempts to counteract. In contrast, in the suspension recited in Claim 89, the body moves in the opposite direction of the force (e.g., the body tilts inwardly during corning). Thus, Van Der Knaap fails to disclose this feature of Claim 89.

Additionally, in standard suspensions of the McPherson type, the roll/pitch center coincides with the roll/pitch reaction center, i.e., the point through which the jacking force acts to

jack the vehicle about its outer wheel. Please see page 2, line 25 through page 3, line 4, for a discussion of the roll/pitch reaction center and the "jacking effect." In complete contrast, the suspension system of Claim 89 specifically recites that the second interconnecting system interconnects the tie structure and the body about the pitch or the roll center such that the pitch and roll center is located at elevations above the reaction center of the vehicle. Thus, Van Der Knaap fails to disclose this feature of Claim 89.

As stated in a previous response, Claim 89 further recites that the suspension system includes a load control system interposed and interconnecting the body, the vehicle support assembly and/or the tie structure(s). The load control system generates a resistance to the movement of the pitch or roll center(s) which is greater than the resistance generated by the load control system to the movement of the center of gravity of the vehicle due to forces applied to the vehicle during operation of the vehicle. After a review of the FIGURES and detailed description of Van Der Knaap, Applicant respectfully asserts that Van Der Knaap fails to teach that "the load control system generates a resistance to the movement of the pitch or roll center(s) which is greater than the resistance generated by the load control system to the movement of the center of gravity of the vehicle due to forces applied to the vehicle during operation of the vehicle."

It is clear from the foregoing that Van Der Knaap fails to disclose the recited combination of features of amended Claim 89. Thus, applicant respectfully requests withdrawal of the pending rejection under 35 U.S.C. § 102(b) with regard to Claim 89. Accordingly, applicant respectfully requests withdrawal of the pending rejections under Section 102(b) of Claims 90, 105, 116-117, and 188-189, which depend from allowable Claim 89.

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New Claim 190

New Claim 190 has been added. Claim 190 depends from Claim 89, and is directed to the subject matter removed from independent Claim 89. A corresponding number of claims have been canceled for entry of this amendment.

CONCLUSION

In light of the foregoing amendments and remarks, applicant submits that all of the claims of the present application are in condition for allowance. Thus, applicant respectfully requests entry of the amendments pursuant to 37 C.F.R. § 1.116 and the allowance of all pending claims. If any further questions remain, the Examiner is invited to telephone applicant's attorney at the number listed below.

Respectfully submitted,

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EXHIBIT A

roll center is located on the centerline of the vehicle at the intersection with the line from the center of tire contact to the virtual reaction point.

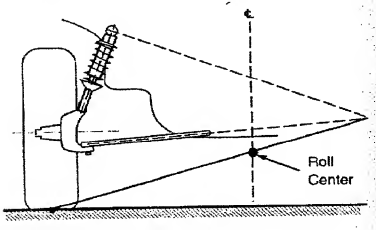

Fig. 7.24 MacPherson strut independent suspension.

Swing Axle

A rear suspension swing axle is generically equivalent to that shown in Figure 7.25. The location of the roll center is easily obtained for this configuration because the virtual reaction point is the actual pivot of the axle. The line from the tire contact passes through the pivot and the roll center is located above the wheel center on the vehicle centerline.

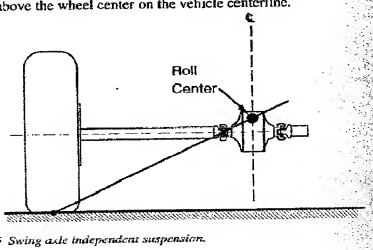

Fig. 7.25 Swing axle independent suspension.

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